

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

After entry of the foregoing amendment, Claims 13-17 and 19-31 are pending; and Claims 19-21 are withdrawn in the present application. Claim 13 is amended; and Claims 24-31 are added by the present amendment. Support for amended Claim 13 and new Claims 24-31 is provided by Applicants' originally filed specification.<sup>1</sup> No new matter is added.

In the outstanding Official Action, Claims 13-17, 22, and 23 were rejected under 35 U.S.C. 102(e) as anticipated by U.S. Patent No. 6,278,811 to Hay et al. (hereinafter "Hay"); and Claims 13, 14, and 22 were rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 5,991,483 to Engelberth.

Amended Claim 13 is directed to a method of filtering an optical signal. The method includes:

coupling an optical signal having a plurality of wavelengths into an optical fiber; and

selectively filtering at least one wavelength out of the plurality of wavelengths by varying a load applied to a compliant support block having at least a first portion of said optical fiber embedded therein,

wherein said first portion of said optical fiber has a periodic variation in refractive index along at least a second portion thereof to form a fiber Bragg grating in said optical fiber.

Hay describes a Bragg grating pressure sensor for measuring the ambient pressure of a fluid.<sup>2</sup> However, Hay does not disclose or suggest "coupling an optical signal having a plurality of wavelengths into an optical fiber" as recited in amended Claim 13. Hay also fails to disclose or suggest "selectively filtering at least one wavelength out of said plurality of wavelengths by varying a load applied to a compliant support block" as recited in amended

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<sup>1</sup> See at least Specification, para. 27 for Claim 13; para. 22 and 24 for Claim 24; para. 2 for Claims 25 and 26; Figure 4 for Claim 27; Figure 5 for Claims 28 and 29; para. 22 and 24 for Claims 30 and 31.

<sup>2</sup> Hay, Abstract.

Claim 13. That is, the wavelength of Hay is adjusted only by changes in ambient pressure and does not include any selectivity as recited in amended Claim 13. Thus, the device of Hay is not disclosed as selectively filtering out a wavelength from the optical signal.

Engelberth describes an apparatus and method for applying tensile stress to an optical fiber having a Bragg cell. The tensile stress is applied by rotating threaded strain control members 34, 35 so as to apply and release the tensile stress. Contrary to the Official Action, Engelberth does not disclose or suggest applying pressure to a compliant support block as recited in Claim 13. That is, the coaxial tubular member 33 of Engelberth is not disclosed as being compliant, because it is not disclosed as capable of being compressed or stretched by an applied force.<sup>3</sup>

Further, assuming, *arguendo*, that the coaxial member 33 of Engelberth was compliant, then the axial strain induced upon the optical fiber 31 would cause a corresponding distortion of the coaxial tubular member 33. That distortion would corrupt the relationship between the thread counts of the strain control members 34, 35 and the axial displacement of the optical fiber 31.<sup>4</sup> Because Engelberth relies upon that relationship for precise adjustments, not only is the coaxial tubular member 33 of Engelberth not disclosed as a compliant support block, but Engelberth actually teaches away from the use of a compliant support block.

As none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claim 13, Applicants submit the inventions defined by Claim 13, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.<sup>5</sup>

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<sup>3</sup> See Specification, para. 18.

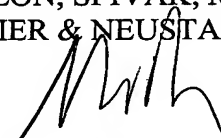
<sup>4</sup> Engelberth, col. 3, lines 46-61.

<sup>5</sup> MPEP § 2142 states "...the prior art reference (or references when combined) must teach or suggest *all* the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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